Abstracts from Invited Speakers

I-1 OARSI AND NICE: ARE THEY BETTER THAN PREVIOUS GUIDELINES?

G. Nuki[1], R. Moskowitz[2], W. Zhang[3]. [1]*University of Edinburgh, Edinburgh, UNITED KINGDOM,* [2]*Case Western Reserve University, Cleveland, OH, USA,* [3]*University of Nottingham, Nottingham, UNITED KINGDOM*

Purpose: In recent years guidelines for the treatment of osteoarthritis (OA) have been criticised for lack of methodological rigour, stakeholder involvement and applicability. The Osteoarthritis Research Society International (OARSI) has recently published global evidence-based, expert-consensus treatment guidelines for OA hip and knee [1,2]. The National Institute for Health and Clinical Excellence (NICE) has also recently published a National Clinical Guideline for the Care and Management of OA in the National Health Service (NHS) in Great Britain [3]. The aim of this study was to attempt to assess whether the OARSI and NICE recommendations were any better than previous guidelines.
Methods: The quality of the guidelines was assessed using the AGREE (Appraisal of Guidelines for Research and Evaluation) instrument and standardised percent scores for scope, stakeholder involvement, rigour, clarity, applicability and editorial independence, as well as overall quality were calculated. Assessments were undertaken by an international panel of 7 independent experts from a variety of health professional disciplines. Scores were also compared with AGREE appraisals of the OARSI guidelines undertaken by 4 scientists from the American Academy of Orthopaedic Surgeons (AAOS) and with the appraisals of the 23 previously published guidelines [2].
Results: Both OARSI and NICE guidelines had higher scores for each domain of quality than previously published guidelines. The OARSI recommendations scored higher than the NICE guidelines for methodological rigour (70% v 59%), editorial independence (75% v 48%) and overall quality (58% v 50%), but had lower scores for stakeholder involvement (42% v 49%), clarity (59% v 64%) and especially applicability (22% v 43%).
Conclusions: Appraisals of the OARSI and NICE guidelines suggest that they are better in overall quality and in most quality domains than previous guidelines. Nevertheless the quality of both could be significantly improved by wider stakeholder involvement and greater attention to applicability. This is clearly a greater challenge for globally applicable international guidelines than it is for a national guideline. The OARSI guidelines can be adapted for national and regional application through translation and liason with patients and professional groups representing stakeholders in primary and secondary care worldwide [1].

References

[1] 1. Zhang W et al *Osteoarthritis and Cartilage* 2008; 16: 137−62.
[2] 2. Zhang W et al *Osteoarthritis and Cartilage* 2007: 15: 981–1000.
[3] 3. National Collaborating Centre for Chronic Conditions. adults. Osteoarthritis: National clinical guidelines for care and management in http://www.nice.org.uk/nicemedia/pdf/CG059FullGuideline.pdf

I-2 NEW EVIDENCE 2006–2008: WHAT IMPACT ON CURRENT RECOMMENDATIONS?

W. Zhang[1], R.W. Moskowitz[2]. [1]*Nottingham University, Nottingham, UNITED KINGDOM,* [2]*Case Western Reserve University, Beachwood, OH, USA*

Purpose: The Osteoarthritis Research Society International (OARSI) developed global, evidence-based consensus treatment guidelines for osteoarthritis (OA) of the hip and knee based on a systematic review (SR) of the literature up to January 2006 [1,2]. Since then a large number of new studies have been published. This study was designed to update the evidence and to examine whether the more recent evidence would influence the profile of recommendations for core therapies for OA.
Methods: A systematic literature search was undertaken for new guidelines, SRs, randomised controlled trials (RCTs) and economic evaluations (EEs) published between 31 January 2006 and 31 January 2008. The quality of guidelines was appraised by an independent group of experts and the core set of treatment modalities was determined by the level of evidence and the frequency of recommendations. The quality of the RCTs included in the SRs and of others retrieved from the literature search were appraised, and where possible effect size (ES), number needed to treat (NNT), relative risks (RR) or odds ratio (OR) and cost per quality adjusted life years (QALY) gained were estimated. Statistical pooling was undertaken as appropriate. Sensitivity analysis and cumulative meta-analysis were conducted to examine the impact of studies published after 2006 and the stability of the effect.
Results: The literature search yielded 1347 citations in the last 2 years. Of these 2 guidelines, 57 SRs, 200 RCTs and 16 EEs met inclusion criteria. Core therapies, defined as treatments supported by Ia level evidence and a recommendation by all guidelines which addressed that therapy, remained unchanged. These included exercise, education, self-management, acetaminophen and COX-2 selective or non-selective NSAIDs with PPI. Whilst the evidence for weight reduction was upgraded from Ib to Ia, the frequency of recommendations for joint lavage was reduced from 100% to 75%. ES changed with inclusion of additional trials. For example the ES for pain relief was reduced from 0.21 (95% CI 0.02, 0.41) to 0.18 (0.04, 0.33) for acetaminophen, but was increased from 0.13 (−0.12, 0.38) to 0.20 (0.06, 0.33) for weight reduction. Cumulative meta-analysis indicated stability of efficacy for some therapies (eg, NSAIDs) but not for others (eg, glucosamine and chondroitin sulphate). New treatment modalities such as celecoxib plus PPI and Tai Chi exercise had been assessed in RCTs. Cost per QALY had been estimated for behavioural graded activity, class based exercise, unicompartment knee arthropathy, and hip versus knee replacements.
Conclusions: Recent research evidence has resulted in changes in the calculated risk-benefit ratio for some treatments for osteoarthritis. The rapid increase of new evidence presents challenges to guideline developers. A regularly updated, evidence-based osteoarthritis research database of well characterised trials of all modalities of treatment for OA would be very useful.

References

[1] 1. Zhang W et al *Osteoarthritis and Cartilage* 2008; 16: 137−62.
[2] 2. Zhang W et al *Osteoarthritis and Cartilage* 2007: 15: 981–1000.

I-3 IS BEST AVAILABLE EVIDENCE THE BEST?

J.M. Bjordal[1,2]. [1]*Bergen University College, Bergen, NORWAY,* [2]*University of Bergen, Bergen, NORWAY*

Purpose: Evaluation of some of the pitfalls associated with comparisons of the numerous interventions used in osteoarthritis management.
Methods: Literature review of systematic reviews and overviews with sensitivity analysis of patient selection bias, interpretation of effect estimates, level of evidence and strength of recommendation in osteoarthritis.
Results: Guidelines are often seen as the end results of a stringent synthesis of the available literature. However, the picture of an unblemished and rigorous scientific method for synthesizing scientific evidence has been taking several blows lately. The method quality scoring of randomized controlled trials (RCT) has proved less reliable than we hoped for, and the interpretation of meta-analyses with mixed results seems unreliable even among experienced reviewers. Methods for grading levels of evidence are drifting from quantification of a number of well-designed RCTs or a single meta-analysis number to achieve the highest evidence level, to qualitative evaluation of the likelihood for future change in evidence. And recommendations are subject to a qualitative balancing act of benefit and harms. Guidelines can be seen as an anchor point on a continuous line from (a) perfect consensus of experts on one side